

OVERVIEW

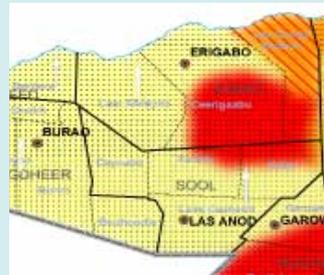
Nutrition Situation

The International Medical Corps (IMC) in partnership with FSNAU/UNICEF conducted a nutrition survey in Sanaag region on October 1st-12th, 2010 using the standard methodology¹. The study aimed at informing on the nutrition situation following the August 2010 Post *Gu* 2010 nutrition and food security analysis which indicated an *Alert* nutrition situation, but a food security crisis in parts of Sanaag region (Maps 1 & 2). This information will also serve as a baseline for nutrition interventions planned by IMC in the area.

Map 1: Nutrition Situation, Sanaag Region July 2010



Map 2: Food Security Situation, Sanaag Region, July-Dec 2010



Preliminary findings using the CDC probability calculator indicate a GAM rate of **>8.5%** (Pr= 0.90) and a SAM rate of **>0.6%** (Pr= 0.90), with one (0.3%) oedema case. These results indicate a sustained **Alert** nutrition phase in Sanaag region. The retrospective crude death rate of **0.35** (0.14-0.86) deaths/10,000 persons/day, with no under five deaths is reported indicating an *Acceptable* situation according to the WHO classification.

High morbidity rates are a predisposing factor to the sub-optimal nutritional status, with 27% of the assessed children reportedly having fallen ill in the two weeks prior to the survey. Also of concern is the access to safe water, sanitation and health facilities which are limited to less than 50% of the assessed population. Poor access to milk for consumption or sale, mainly due to poor livestock body conditions and out-migration are aggravating factor in the pastoral population in the area during this time of the year.

The FSNAU/UNICEF nutrition survey schedule for the period November-December 2010 (Deyr 2010/11 cycle) is provided on page 10 of this document.

Linking Nutrition Information to Response

Following the FSNAU Post *Gu* 2010 (April-July 2010) seasonal analysis of the nutrition and food security situation, stakeholders in Somalia have worked jointly to link information on the current situation to response. A special focus is provided in this Nutrition Update on efforts by the Somalia Nutrition Cluster, FSNAU, Save the Children and

¹ A two stage cluster sample of children aged 6-59 months, and the WHO growth standards in the analysis

the UNFAO/Response Analysis Support Team on response analysis and implementation:

- The Nutrition Cluster Review Committee, alongside with other clusters in the Somalia country program, are currently reviewing 39 project sheets as part of the Somalia 2011 Consolidated Appeal Process (CAP). A description of how the nutrition information is used to develop the response strategy is provided by the nutrition cluster coordinator.
- Besides the bi-annual nutrition situation classification and cartographical presentation of findings, FSNAU provides estimated caseloads of acute malnutrition based on Weight-for-height Z scores (WHZ) findings. Map 4, illustrates the distribution of the estimated caseloads for the acutely malnourished children, and the regional importance relative to population density based on the Post *Gu* 2010 nutrition situation findings. This piece describes how these numbers are estimated. Projected caseloads of acute malnutrition in year 2011 are also explained.
- Save the Children is currently undertaking a nutrition program in Hiran Region, an area faced with sustained **Very Critical** Nutrition Situation from the Post *Deyr* 2009/10 and shares a human interest case study of one of their beneficiaries.
- The UNFAO/Response Analysis Support Team (RAST) for Somalia, through a consultative process has developed a food security and nutrition Response Analysis Framework comprising of four elements discussed in this bulletin:
 - A problem tree analysis of proximate, underlying and structural causes of food insecurity and malnutrition in Somalia;
 - A vulnerability analysis matrix which identifies the vulnerability to food insecurity of the various livelihood zones in Somalia
 - The identification of response objectives and potential response options based on the problem and vulnerability analysis;
 - A Response Options Analysis Matrix to evaluate potential response options against feasibility and appropriateness criteria.

Special Study - Child Feeding Index

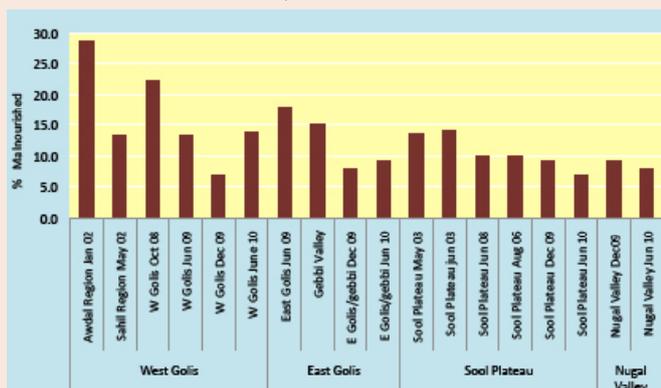
Efforts to measure and demonstrate the association between feeding practices and nutritional outcomes are generally hampered by the tendency of most studies to focus on a single feeding practice (for example, the impact of exclusive breastfeeding). While single feeding practice approaches are valuable, they result in fragmented information on the impact of child feeding on the nutrition outcomes. A composite child feeding index (CFI) that combines various dimensions of feeding as one variable has, therefore, been proposed. In this regard therefore, FSNAU has undertaken a pilot study with the objective of illustrating the association between a composite CFI on infant and young child feeding practices and nutrition outcomes in Somalia. The findings are shared in this Nutrition Update.

SANAAG REGION DEPICTS AN ALERT NUTRITION SITUATION

Sanaag region is located on the eastern side of Somaliland. It is bordered by Sool region to the south, Galbeed region to the west and approximately 380 kilometres of Red Sea coastline to the north (Map 3). The region is divided into four main districts namely, Erigavo, Badhan, Lasqouraay and El Afweyne, with Erigavo Town as the regional capital and the latter as district capitals. The livelihood system in the rural area of the region is predominantly pastoral¹. The region is remote and mountainous by nature; this difficult physical terrain has resulted in poor infrastructure and limited development in the area leading to a chronic lack of basic services.

The FSNAU Post *Gu* 2010 integrated nutrition analysis classified the nutrition situation of most livelihood zones in Sanaag region as *Alert*², with a small section of the West Golis/Guban livelihood zone found towards the west of Sanaag region in a *Serious* nutrition phase. The *Alert* nutrition situation was mainly attributed to the improved household food security, resulting from the favourable *Gu* 2010 rains received in that region. Figure 1 indicates the trends in the levels of acute malnutrition recorded in the region; generally the acute malnutrition rates reported in the past seasons have shown below emergency thresholds, apart from the West Golis/Guban livelihood zone.

Figure 1: Trends in levels of Acute Malnutrition (WHZ <-2Z scores or oedema, WHO 2006) in Sanaag Region Livelihood Zones, 2002-2010



¹ The pastoral livelihood zones are the East Goils/Gebbi valley, Sool Plateau of Sanaag region and Nugal Valley

² The global acute malnutrition rates (GAM <-2 z scores or oedema) areas follows: >9.3% in the East Goils/Gebbi Valley, >7.0% in Sool Plateau, >7.9% in Nugal Valley and >13.8% in West Goils/Guban livelihood zones respectively.

Map 3: Administrative Boundaries in the North



Between 1st- 12th October 2010, a comprehensive nutrition survey was conducted in the Sanaag region by IMC, FSNAU and partners³. Using a two-stage probability proportionate to size (PPS) sampling methodology, a total of 315 households were assessed for household and anthropometric data, while 516 households were assessed for mortality from 25 clusters in the region. A total of 492 children aged 6-59 months were assessed. However during analysis, due to data quality issues, anthropometric measurements from four clusters were excluded, therefore a total of 392 children from 252 households were analyzed.

Results using the WHO growth standards and estimated by the CDC probability calculator, reported a GAM rate of >8.5% (Pr= 0.90) and a SAM rate of >0.6% (Pr= 0.90), with one (0.3%) oedema case. These results indicate an *Alert* nutrition situation in the region according to WHO classification. The retrospective Crude Death Rate is 0.35 (0.14-0.86) deaths/10,000 persons/day, with no under five deaths reported indicating an *Acceptable* situation according to the WHO classification (Table 1).

High morbidity rates in a population are a predisposing factor to poor nutritional status. The proportion of children assessed and that had reportedly fallen ill in the two weeks prior to the survey, was high at 26.5%. The proportion of children reported to have suffered from diarrhoea in the 2 weeks prior to the assessment was 9.4%. However a higher number of children were reported to have suffered from pneumonia (14.3%) and febrile illness (14.8%). Although in this assessment there was no statistical association between morbidity and acute malnutrition, it is important to observe that a high proportion of children were reported to have been ill, and were also identified as being malnourished.

³ SRCS and the Ministry of Health

The measles immunization and vitamin A supplementation status for the assessed children in the 6 months prior to the assessment is well below the recommended Sphere standards (73.0% and 68.9% respectively), increasing the children's susceptibility to disease. A high proportion of children assessed had not received the full recommended dose of the polio vaccine (Table 1). The Child Health Days conducted by UNICEF and partners scheduled to start on the 19th October - 6th November 2010, are expected to improve the vaccination status of the population.

The relationship between safe water, proper sanitation and disease is well documented. Safe water and proper sanitation are essential in the prevention of disease, especially diarrhea. Therefore it is worrying to observe that the availability of water, sanitation and health facilities in the area are limited, with only 44.7% of the population having access to safe water and only 49.9% accessing appropriate sanitation facilities. IMC supports five health facilities in the region, in Godobiyoocas, Hingalool, Maydh, Yufle and Dharar areas. These facilities provide basic health services and OTP outreach services; however they are still out of reach for a large proportion of the population. From June to September 2010, IMC have screened a total of 4,517 children in the region, of which 243 (5.4%) were identified as severely malnourished. The outreach services teams conduct supplementary feeding and deworming activities in addition to treatment of infections and diarrhoea, through provision of oral rehydration salts (ORS). IMC has also embarked on projects in the region which aim at rehabilitating water catchments in 35 villages in order to improve the population's access to safe water. The issue of lack of access to safe water and adequate and appropriate sanitation and health facilities is crucial and should be addressed as an underlying cause of acute malnutrition.

About a quarter (22.9%) of the households assessed reportedly consumed <4 food groups a day⁴, however the infant and young child feeding practices reported among the households remained sub-optimal, with only 49.7% of the children aged 6-24 months still reportedly breastfed at the time of the survey. Less than half of the population (40.1%) of the households

⁴ This indicates the dietary diversity of the population is *Serious* according to the FSNAU Estimated Framework of estimating the Nutrition Situation



Children fetching water in an urban settlement

reportedly consumed milk in the 24 hours preceding the assessment. Milk consumption has a positive impact on the health and nutritional status of children, and can be seen as one of the mitigating factors to the *Alert* nutrition situation in the region. However, the low milk consumption is mainly attributed to reduced availability and accessibility due to the poor animal body conditions and out-migration owing to lack of adequate water and pasture. According to qualitative data collected, this was noted in the Guban⁵ areas assessed namely, Raguud and Cilaamo villages. In the Guban livelihood zone, the main rainy season is in January, therefore currently they have not received any rains. This has led to out migration of animals, and poor animal body conditions resulting in limited milk availability, predisposing the children in the area to high incidences of acute malnutrition.

Overall, the nutrition situation in the region is *Alert*, with the areas in the Guban livelihood zone being the most vulnerable. However, the poor access to safe water and appropriate sanitation facilities and practices, in addition to the high morbidity rates exacerbated by the poor access to health facilities, remain crucial risk factors. The chronic underlying factors affecting malnutrition in the livelihood, such as poor child care and feeding practices, poor sanitation and hygiene practices, inadequate supply of safe drinking water and limited access to health facilities, remain long term challenges to the health and nutrition situation of the population. Although the situation has been identified as *Alert*, the population remains highly vulnerable to shocks and therefore, it is important to closely monitor the well being of the population, it is also imperative to instigate or continue interventions targeting the underlying causes of food insecurity and disease in the region.

⁵ Coastal belt between the Golis hills and the Red Sea

Table 1: Summary of Results for Sanaag Region Nutrition Survey

Indicator	N	%	(CI)
Total number of households assessed for children	252	100	-
Total number of assessed children	392		
Total number of households assessed for mortality	516	100	-
Child Malnutrition			
Global Acute Malnutrition (WHO 2006)	38		>8.5 (Pr=0.90)
Severe Acute Malnutrition (WHO 2006)	4		>0.6 (Pr=0.90)
Oedema	1	0.3	
Global Acute Malnutrition (NCHS)	35		>7.6 (Pr=0.90)
Severe Acute Malnutrition (NCHS)	2		>0.2 (Pr=0.90)
Global Acute Malnutrition (WHM<80% or oedema - NCHS)	10	2.8	(1.7-4.4)
Severe Acute Malnutrition (WHM<70% or oedema - NCHS)	1	0.3	(0.0-2.2)
Global Acute Malnutrition by MUAC (<12.5 cm or oedema)	38	10.1	(6.9-13.5)
Severe Acute Malnutrition by MUAC (<11.5 cm or oedema)	19	5	(2.4-9.5)
Proportion of children Stunted (HAZ<-2)	44	12.1	(8.9-16.3)
Proportion of children Underweight (WAZ<-2)	35	9.7	(6.7-13.7)
Child Morbidity			
Children reported ill in the previous 2 weeks	104	26.5	(17.4-35.7)
Children reported with diarrhea in 2 weeks prior to assessment	37	9.4	(5.0-13.8)
Children reported with ARI within two weeks prior to assessment	56	14.3	(6.1-22.5)
Children reported with febrile illness in 2 weeks prior to assessment	58	14.8	(6.8-22.8)
Children reported with suspected measles within one month prior to assessment	7	1.8	(0.3-3.3)
Child Immunization status			
Children immunized against measles	286	73	(61.8-84.1)
Children who have ever received polio vaccine:			
No dose	32	8.2	(3.3-13)
One dose	47	12	(8.2-15.8)
Two doses	49	12.5	(7.3-17.7)
Three or more	264	67.3	(57.7-77)
Children reported to have received vitamin A supplementation in last 6 months	270	68.9	(57.3-80.5)
Maternal Health & Nutrition			
Total women acutely malnourished N= 277	40	14.4	97.8-21.1)
Pregnant women acutely malnourished (MUAC<23.0 cm) (N=157)	40	25.5	(13.7-37.2)
Non pregnant women acutely malnourished (MUAC≤18.5 cm) (N=120)	0		
Women who received tetanus immunization:			
None	50	18.1	11.0-25.1
One Dose	39.0	14.1	8.5-19.6
Two Doses	81	29.2	22.8-35.7
Three Doses	107	38.6	26.0-51.3
Household Access to Essential Indicators			
Proportion of households who reported to have consumed ≤3 food groups	58	22.9	(7.9-38)
Access to mosquito Net	78	30.8	(18.3-43.4)
Reported access to safe/protected drinking water	113	44.7	(24.5-64.9)
Reported access to latrine/ sanitation facilities	226	49.9	(33.5-66.1)
Mortality			
Under 5 Death Rate (U5DR) as deaths/10,000/ day*		0	
Crude Death Rate (CDR) as deaths/10,000/ day		0.35 (0.14-0.86)	(0.14-0.86)

Plausibility Checks

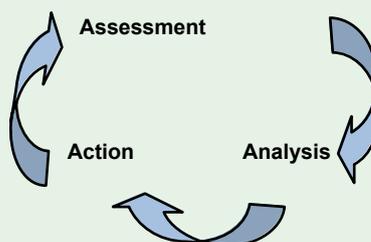
Criteria	Score	Remarks
Missing Flagged Data	0 (0.3%)	Good
Overall Sex Ratio	0 (p=0.614)	Good
Overall Age Distribution	4(p=0.003)	Poor
Digit Preference Score- Weight	0(5)	Good
Digit Preference Score- Height	4 (14)	Poor
Standard Deviation WHZ	6 (1.18)	Poor
Skewness- WHZ	0 (-0.06)	Good
Kurtosis – WHZ	0 (-0.59)	Good
Poisson Distribution WHZ <-2	1 (p=0.015)	Acceptable
Overall Score	15%	Poor

SPECIAL FOCUS: LINKING NUTRITION INFORMATION TO RESPONSE

Nutrition Cluster Experience – by Anne Sophie Porche

The aim of the cluster approach is to strengthen partnerships and ensure more predictability and accountability in international responses to humanitarian emergencies, by clarifying the division of labour among organizations, and better defining their roles and responsibilities within the different sectors of the response. It is about making the humanitarian community more structured, accountable and professional, as well as setting clear lines of communication and thereby improving coordination, partnership, accountability and transparency. The Nutrition cluster in Somalia has put systems in place and utilizes several tools to attain this aim. These include technical taskforces to address emerging issues, coordination meetings both with nutrition partners and other sectors, the use of the 3W matrix (*Who does What Where*) to ensure that resources are utilized effectively with no gaps and duplication of effort, and the application of the Triple-A framework (Figure 2) in linking situation analysis to response. In the latter case, assessment, analysis and action are viewed as continuous steps in project planning and response with each step leading to the next.

Figure 2: The Triple-A Cycle (UNICEF)



Several agencies (including Medair in Adale District, IMC in Sanaag and WFP in Central regions), and clusters (food aid, WASH, health) have conducted nutrition surveys jointly with FSNAU in the past years and collected data on key indicators that inform on baseline indicators, performance of programmes, or providing guidance on priority areas of focus.

The Nutrition Cluster Response Plan for 2011 is based on core indicative information or needs analysis derived mainly from seasonal nutrition survey findings by FSNAU/UNICEF and other key partners. "Given the current nutrition situation and the operational environment, all projects remain high priority in order to address the nutrition vulnerability". (Ref: The Nutrition Work Plan for Somalia for 2011, Sep 2010). The Somalia Nutrition Cluster's response strategy focuses on treating as well as preventing cases of malnutrition, while addressing underlying causes. Activities are implemented in an integrated and coordinated fashion involving nutrition, health, water and sanitation, and food/livelihood security partners. In addition, the cluster advocates for considering the benefits gained by addressing nutritional needs throughout the lifecycle; and reinforces the capacity of national NGOs/CBOs.

Where applicable the **Cluster Response Plan** uses Sphere standards as indicators. Application of these standards can account for differences between targets versus need. For example, Sphere necessitates accessing at least 60% of acutely malnourished cases in feeding programmes. Where no Sphere standard exists, the indicator is based on experience and best practice from the cluster members knowing the constraints of access in the operational environment of Somalia. Sources of data include FSNAU's nutrition survey and bi-annual seasonal assessments, programming data (monthly reports) received by UNICEF and WFP from nutrition/health implementing partners, and information collected in monthly cluster coordination meetings.' (Ref: The Nutrition Work Plan for Somalia for 2011, Sep 2010).

The Consolidated Appeal Process (CAP) 2011: A total of 39 CAP 2011 project sheets received by the Nutrition Cluster coordinator are currently being analyzed by the Cluster Review Committee for suitability for inclusion in the final CAP document. The criteria for inclusion of the project sheets in to the Nutrition cluster of the CAP 2011 include: relevance to the nutrition work plan for 2011, inclusion of needs analysis based on the FSNAU Post *Gu* 2010 analysis and other current data; and feasibility of the agency to address the needs.

The Nutrition Strategy for Somalia (2010-2013): The results-based interagency nutrition strategy led by WHO provides a detailed action plan to guide prioritization of interventions in face of limited resources, also guide project implementation and resource mobilization. Based on the situational analysis, review of best practices and proven effective interventions feasible in the challenging context of Somalia, the following goal and 6 outcomes for the strategy have been established:

Goal: To contribute to improved survival and development of Somali people through enhanced nutritional status. This will be accomplished through the achievement of the following outcomes:

1. Improved access to and utilization of quality services for the management of malnutrition in women and children by implementing the Basic Nutrition Services Package (BNSP);
2. Sustained availability of timely and quality nutrition information and operational research into effective responses to the causes of under nutrition;
3. Increased appropriate knowledge, attitudes and practices regarding infant, young child and maternal nutrition;
4. Improved availability and coverage of micronutrients and de-worming interventions to the population;
5. Nutrition is mainstreamed as a key component of health, WASH, livelihoods, food aid and education sectors; and
6. Improved capacity and means in country to deliver essential nutrition services.

In conclusion, reliable and timely information on the nutrition situation and the underlying drivers to the crisis, remain an integral part of the nutrition cluster response plan and longer term strategy for the nutrition sector in Somalia.

Caseloads Estimation of Acutely Malnourished Children

Caseloads Based on Situation Analysis

In addition to the *Nutrition Situation Classification* and cartographical presentation of findings, FSNAU normally provides estimated caseloads of acute malnutrition based on Weight-for-height Z scores (WHZ) findings. Map 4, illustrates the distribution of the estimated caseloads for acutely malnourished children, and the regional importance relative to population density. To explain, the *Gu1* 2010 nutrition cycle estimated approximately **230,000** children aged below 5 years as acutely malnourished of which **35,000** are severely malnourished in the total population. These figures are derived using the national median rate of 15.2% for global acute malnutrition and 2.4% as the median severe acute malnutrition rate, from the 25 representative surveys conducted in April – July 2010, with extrapolations of findings to livelihoods where representative surveys could not be done. Stunting levels are also provided.

The distributions of the 230,000 (100%) acutely malnourished children, of whom 35,000 (100%) are in severely malnourished, are illustrated in text boxes. For example 25% of the 230,000 acutely malnourished children reside in the Shabelle regions, followed by the Northwest (20%), Bay (13%) and Central (12%). Apart from Bay and Central (Addun pastoralists), neither of these areas report a *Very Critical* nutrition situation (>20% GAM), yet due to the population density, the absolute numbers of acutely malnourished children are very significant. For the severely malnourished children, the regions hosting the majority are again the Shabelle at 30%, followed by Bay (12%), Central (12%) and Juba (11%) regions.

This therefore highlights that the response should not just focus on areas of *Critical* and *Very Critical* nutrition situation but also on the distribution of these cases. *Serious - Alert* stunting levels evident in Bay (34.2%), Juba (29.6%), Shabelle (28.5%) and Bakool (22.8%), illustrate the impact of a chronic nutrition crisis in the population groups in the South. In the north however, stunting levels are within WHO acceptable thresholds. The indicators used are based on the WHO Growth Standards 2006, <-2 WHZ and/or oedema for GAM and <-3 and/or oedema for SAM.

It should be observed that these caseloads estimates reflect the nutrition situation during the Post Gu 2010 (April to July 2010).

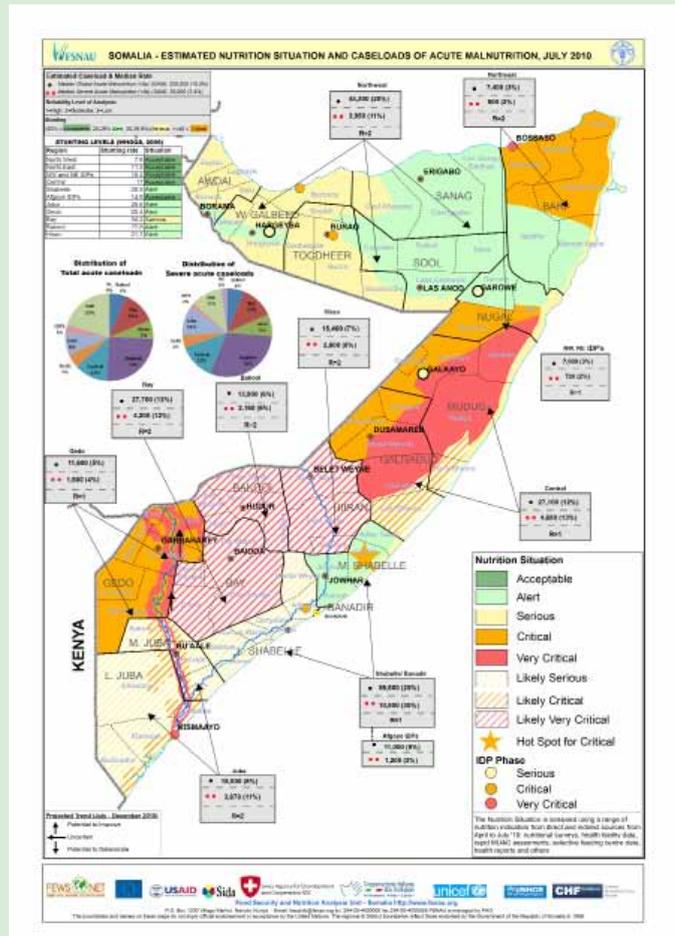
Caseloads Estimates for 2011

The estimated cumulative caseload of acutely malnourished children projected for the coming 12 months, is **377,000** of which **78,400** are severely malnourished and the estimated caseload of acute malnourished pregnant and lactating women is 84,893. **These numbers are based on adapting a prevalence estimates to incidence using a conversion factor of 1.6.**

Given the outlook for early 2011 is not expected to be as positive as the current situation, consultative discussions were held on how best to use the available caseload analysis for Somalia and therefore rather than base the expected caseload for the coming 12 months on the current median prevalence rates, given the improved nutrition situation, an average of the current season prevalence estimates plus the previous season's prevalence estimates (*Deyr* 2009/10), which was less positive was used.

The conversion factor of 1.6 is the lower range of a proposed set of conversion factors currently being adapted in different countries. There is still no agreed upon international standard, as episodes of acute malnutrition are reported to have different duration in different contexts; however it is generally assumed that 1.6 is a reasonable estimate at the lower end of the range. For that reason the Nutrition Cluster for Somalia is currently using this factor, but perusing specific research to identify a more Somalia specific factor in the coming year.

Map 4: Estimated Caseloads of Acute Malnutrition July, 2010





CASE STUDY FROM SC OTP PROGRAM IN HIRAN



Interview conducted by SC - Abdullah Magan (pictured) - Nutrition Program Manager Hiran Region, on August 24, 2010 during a field visit to Bergadid village, Beletweyne district.

Fatuma Ahmed, a mother of six resides in Bergadid Village, located 45 km from Belet Weyne Town. Her three year old daughter Faiza was admitted into Save the Children's Outpatient Therapeutic Programme for severely malnourished children in June 2010, suffering from marasmus. Several weeks later, at the time the interview was conducted, Faiza appeared to be in good health and to have gained weight. Fatuma, a member of a Bergadid pastoral community is pastoral destitute following the loss of her livestock due to the persistent droughts in Hiran Region. She no longer has access to milk to feed her children.

"My name is Fatuma Ahmed and I am a mother of six. I live in Bergadid village. We are facing many difficulties. There is lack of food in our family because the drought has lasted long, killing all our livestock. Prior to the drought, I had twenty cows and one hundred goats. However due to lack of pastures and browse, all the cows and goats have been wiped out. We are no longer able to access milk or meat. Unfortunately also, we no longer have access to the general food distribution from WFP, following their withdrawal from our region in December 2009 as a result of insecurity. Insecurity has also limited access to casual labor or employment for income.

*We have very little food to eat. We have no food in the morning, while for the rest of the day we eat grains that we receive through friends and Corn Soya Blend family ration received at the **Save the Children** OTP site. My three year old daughter Faiza became very sick because she didn't have enough food to eat. She became very skinny and weak. Thanks to the plumpy nut and medications she had been given through **Save the Children's** OTP site, or else my child would have deteriorated and died." Narrated Fatuma during the interview".*



Fatuma and baby Faiza listening while a nutrition assistant gives plumpy nut feeding instructions, SC Bergadid OTP site, August 10, 2010.

According to Abdullah Magan the SC - Nutrition Manager for Hiran Region, "The persistent drought and lack of pasture has led to a collapse of the pastoral livelihood system in Bergadid village. There is no more grazing areas due to the lack of rain, and the environment has been pushed beyond its capacity to sustain the livestock of the community. The daily temperatures in this part of Somalia can reach anywhere from the high forties to the low fifties Celsius."

"Bergadid village is one of the communities where Save the Children has set up an OTP site for severely acute malnourished children. We have a total of 204 OTP beneficiaries. This village was selected following FSNAU Post Deyr 2009/10 nutrition survey report which showed GAM and SAM prevalence of 21.2% and 5.3% respectively among the Pastoral population of Hiran region". The Gu 2010 results depict a sustained **very critical** nutrition phase.

LINKING NUTRITION INFORMATION TO RESPONSE

UNFAO-Response Analysis Support Team

John Odea & Suleiman Mohamed

In an effort to increase the link between food security and nutrition situation analysis and response, the UNFAO/Response Analysis Support Team (RAST), through a consultative process has developed a food security and nutrition Response Analysis Framework (RAF) comprising of four elements.

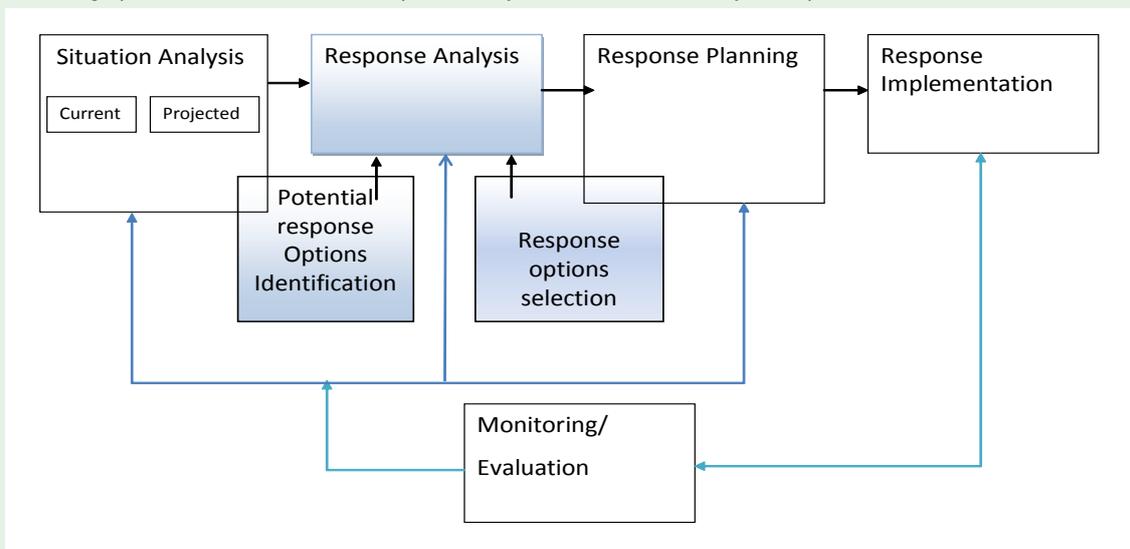
- A problem tree analysis of proximate, underlying and structural causes of food insecurity and malnutrition issues in Somalia;
- A vulnerability analysis matrix which identifies the vulnerability to food insecurity of the various livelihood zones in Somalia
- The identification of response objectives and potential response options based on the problem and vulnerability analysis;
- A Response Options Analysis Matrix to evaluate potential response options against feasibility and appropriateness criteria.

Members of the Agriculture and Livelihoods, Nutrition and Food Assistance Clusters reviewed the Response Analysis Framework in a joint workshop held on August 23rd-24th, 2010 in Nairobi. The workshop concluded the response options analysis for three of the livelihood zones identified as facing a food insecurity crisis in the 2010. The RAST is preparing an improved RAF tool based on outcomes of the workshop.

The Clusters used outputs of the workshop to improve the Cluster Response Plan. This is most evident in the Agriculture and Livelihoods Cluster, where the RAST worked closely with Cluster members to apply the outcomes of the RAST workshop and the logic of the RAF to the formulation of the Cluster Response Plan. In the current Agriculture Livelihoods plan for the 2011 CAP, there are a number of themes which offer potential support to improving the nutrition of vulnerable groups. A key objective is to “Contribute to stabilizing food access and nutrition....”. This involves provision of food vouchers, an activity which will be carried out in close coordination with the Nutrition and Food Aid clusters. A further activity directly related to nutrition is the redistribution of lactating animals for labour constrained poor households.

The RAST compiled a position paper on Food Based Routes to Nutrition scheduled for presentation to an Expert Working Group in FAO Rome on 21 October. In preparation the RAST have reviewed evaluations in the international literature to identify models which might readily be adapted to conditions in Somalia. These typically include dietary modification, horticultural and small animal production. Best practice from existing NGO projects in country are also considered, especially work to date in the area of vouchers linked to micronutrient provision for vulnerable groups and areas for preliminary operational research in developing food based routes to nutrition. The paper will be used as a basis for discussion in linking the work of the Agriculture and Livelihoods Cluster with Nutrition outcomes. Similarly it is intended to promote further discussion between the Nutrition and Agriculture & Livelihoods to discuss closer inter-cluster activities in a forthcoming inter-cluster meeting.

Figure 3: Response Analysis – Contextual overview (Adapted from IPC Technical Manual Version 1.1. FAO Rome, 2008)
This graphic shows the location of response analysis in the situation analysis-response continuum



CHILD FEEDING INDEX (CFI) PILOT STUDY IN SOMALIA

Infant and young child feeding practices (IYCFP) directly affect the nutritional status of children under two years of age and ultimately impact on their long term nutrition, health and survival. Inadequate nutrition is a known cause of stunting. When stunting occurs during pregnancy and in the first two years of life, it causes damage to physical growth, brain development, and human capital formation which can be extensive and largely irreversible¹. It is therefore imperative, to monitor child feeding practices and the resultant impact on the nutritional well being of the children under the age of two years. It has been noted that generally efforts to measure and demonstrate the association between feeding practices and nutritional outcomes have been hampered by the tendency of most assessments to focus on a single feeding practice such as the impact of exclusive breastfeeding and the timing of the introduction of complementary foods. While these single feeding practice approaches are valuable, they result in fragmented information on the impact of child feeding on the nutrition outcomes. A composite child feeding index (CFI) that combines various dimensions of feeding as one variable has therefore been proposed² as a possible remedy to some of the weaknesses arising from evaluation of a single IYCFP. It was against this background that FSNAU designed a pilot study with an objective of exploring the feasibility of creating a composite CFI to test and illustrate the association between IYCFP and nutrition outcomes in Somalia.

The study was integrated in three purposely selected livelihood-based nutrition assessments conducted by FSNAU and partners between May and July 2009 among the Pastoral, Agro-pastoral and Riverine populations in Gedo, Shabelle and Juba regions respectively, in southern Somalia. The two-stage population proportional to size (PPS) sampling approaches were followed in the selection of the target children, and the ENA for SMART software used to select the study clusters. Specific questions designed for CFI study were included in the regular nutrition assessment questionnaire used in Somalia, but only administered to the targeted sub-sample of children aged 6-24 months. A total of 667 children aged 6-24 months were assessed. The breastfeeding, bottle feeding, complementary feeding and dietary diversity practices in the previous 24 hours prior to the assessments were scored by assigning 0-3 scores based on the level of adherence to the recommended feeding practices¹ that are age-specific. A composite age-specific CFI with scores ranging from zero to seven was constituted for each child by summing up the scores of the four IYCFP. Three ordered categories (low 0-3; moderate, 5; high 6-7) were created by running a tertile distribution of CFI score using SPSS version 17 software. The anthropometric measurements (weight and height) were taken and age determined to establish the nutritional status (wasting, underweight and stunting) of the assessed children.

The results reported a poor nutritional status among the children aged 6-24 months, with 17.3% identified as acutely malnourished, 32.9% and 28.7% as underweight and stunted respectively. Poor child feeding practices was noted with an overall mean CFI score of 4.4 ± 0.15 , while the distribution of the CFI score varied significantly with age, with young children recording a significantly higher mean score than their older counterparts aged 9-11 months (4.6 ± 0.24) and 12-24 months (4.0 ± 0.15). In addition, slightly more than half (51%) of the assessed children were in the low tertile (reflecting poor feeding practices) while only 17% were in the high tertile that reflected good feeding practices. Moreover, the distribution of the cases of the three forms of malnutrition (<-2 z-score) were more concentrated in the low CFI tertiles than in the higher tertiles as shown in Figure 4. However, statistical analysis only showed a significant association between CFI scores and height-for-age z-scores (HAZ) with mean HAZ scores in higher tertiles being significantly higher than the mean HAZ scores in low and middle CFI tertiles ($p < 0.05$). Children in the lower tertiles were nearly three times more likely to be stunted than those in higher CFI tertiles (RR=2.78; CI: 1.1-7.2; $p > 0.05$). The reasons why wasting and underweight was not significantly associated with CFI scores could be due to the effect of morbidity. It is important to point out that the assessment was carried out when Juba and Shabelle regions were experiencing an outbreak of acute watery diarrhoea. The analysis of this study confirmed a significant association between acute malnutrition and morbidity, with children who had diarrhoea in the two weeks prior to the assessment being 1.6 times more likely to be acutely malnourished than those without diarrhoea (RR=1.63; CI: 1.1-2.39; $p < 0.05$).

Overall, the study shows that a composite CFI derived from the four feeding components reflects a more comprehensive IYCFP; is significantly associated with stunting; and has a potential use in evaluating and illustrating the impact of IYCFP on stunting. The study recommends the use of CFI approach to complement the single feeding practice methodologies. Further, the study showed poor child feeding practices among the children aged 6-24 months in the study areas which varied with age, implying that different approaches to improve breastfeeding and complementary feeding that are tailored to meet age sensitive feeding requirements are required to mitigate the situation. This is crucial given that the period from pregnancy to two years provides a window of opportunity for nutrition interventions to prevent stunting within the first two years of life thus avoiding stunting-related effects that are known to be severe and with lifelong consequences.



A woman breastfeeds a baby

Figure 4: Distribution of Wasting, Underweight and Stunting (<-2 z scores) case by CFI Tertiles



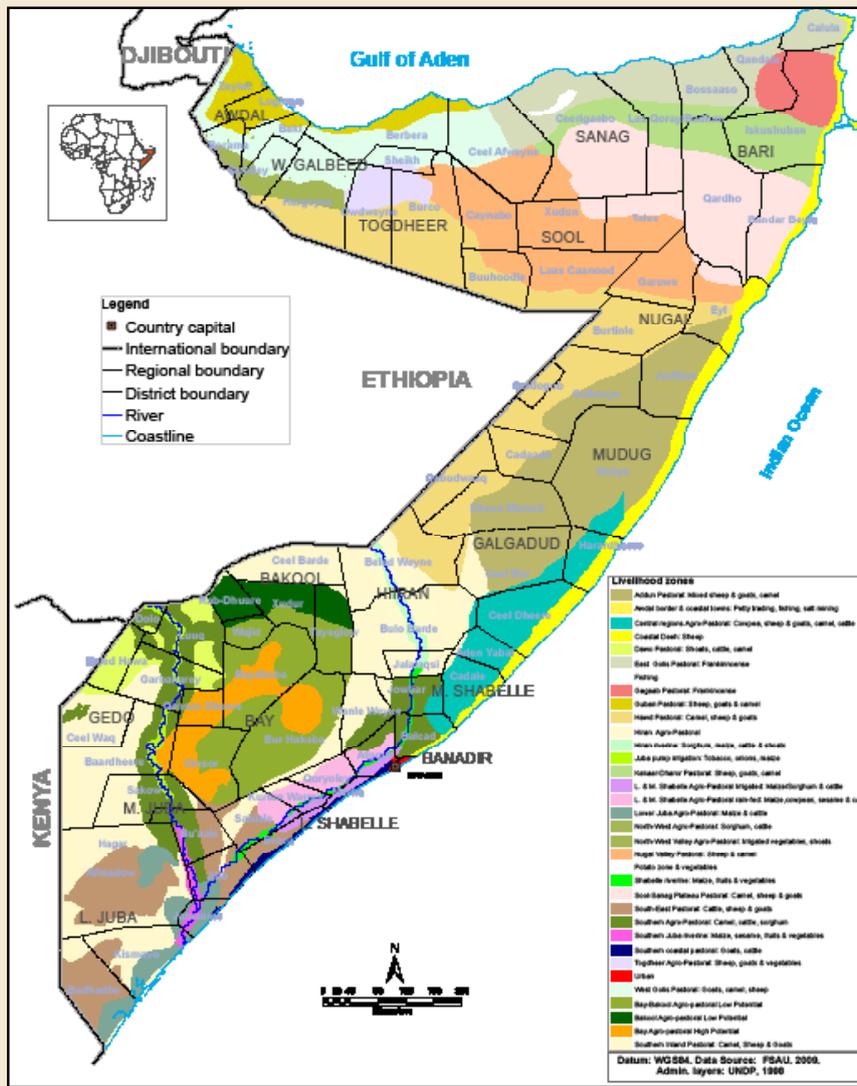
¹ World Bank, 2006. Repositioning Nutrition as Central to Development: *A Strategy for Large-Scale Action*

² Arimond M & Ruel, TM. 2002. Assessing Care: Progress Towards the measurement of selected childcare and feeding practices, and implications for programs

TABLE 2: FSNAU/UNICEF NUTRITION SURVEY PLAN NOVEMBER-DECEMBER 2010

Livelihood Zone /Population Group	Month	Livelihood Zone /Population Group	Month
1 Togdheer Agro-pastoral	Dec'10	18 Gedo Riverine	Nov'10
2 West Golis Pastoral	Dec'10	19 Hargeisa IDP	Nov'10
3 Northwest Agro-pastoral	Dec'10	20 Burao IDP	Nov'10
4 Sool Plateau (Northwest)	Dec'10	21 Berbera IDP	Nov'10
5 Hawd Pastoral (Northwest)	Dec'10	22 Bossaso IDP	Dec'10
6 East Golis Pastoral (Northwest)	Dec'10	23 Galkayo IDP	Dec'10
7 Nugal Valley Pastoral (Northwest)	Dec'10	24 Garowe IDP	Dec'10
8 Sool Plateau (Northeast)	Dec'10	25 Afgoye IDP	Dec'10
9 Coastal Deeh (Northeast)	Dec'10	26 Juba Riverine	Nov'10
10 Golis/Kakaar Pastoral (Northeast)	Dec'10	27 Juba Agro-pastoral	Nov'10
11 Nugal Valley Pastoral (Northeast)	Dec'10	28 Juba pastoral	Nov'10
12 Hawd Pastoral (Central)	Nov'10	29 Hiran Riverine	Nov'10
13 Addun Pastoral (Central)	Nov'10	30 Hiran Agro-pastoral	Nov'10
14 Middle Shabelle Agro-pastoral	Nov'10	31 Hiran Pastoral	Nov'10
15 Middle Shabelle Riverine	Nov'10	32 Bakool Agro-pastoral	Nov'10
16 Gedo Pastoral	Nov'10	33 Bakool Pastoral	Nov'10
17 Gedo Agro-pastoral	Nov'10	34 Bay Agro-pastoral	Nov'10

Map 5: Somalia Livelihood Zones



Recent FSNAU publications:

- Galkayo Urban Baseline Report, October 2010
- FSNAU/FEWSNET Market Data Update, September 2010
- FSNAU/FEWSNET Climate Data Update, September 2010
- FSNAU Technical Series Report, Nutrition Situation Post Gu 2010, September 2010
- FSNAU Technical Series Report, Post Gu 2010 Analysis, September 2010

NOTE: The above publications and releases are available on the FSNAU website: www.fsnausomali.org